What is claimed is:

1. A circuit comprising:

a first resonator magnetically coupled to a second resonator, said first and second resonator each further comprising:

a first capacitor having a first capacitance and a first inductive element having a first inductance coupled between a signal line and a first ground;

a second capacitor having a second capacitance and a second inductive element having a second inductance coupled between said signal line and a second ground so that current flowing through said first and second inductive elements are substantially in opposite directions; and

wherein the product of said first capacitance and said first inductance is substantially equal to the product of said second capacitance and said second inductance.

2. The circuit of claim 1 wherein said signal line of said first resonator is for transmitting an input signal to said first resonator and said signal line of said second resonator is for transmitting an output signal from said circuit to a load, said input signal being coupled to said first resonator through a first coupling capacitor in series with said first resonator and said output signal coupled to said load through a second coupling capacitor in series with said second resonator.

3. The circuit of claim 1 wherein said first and second inductances and said first and second capacitances are of identical values of inductance and capacitance respectively.

4. The circuit of claim 1 wherein optimal coupling between said first and second resonators is maintained through a range of frequencies by altering the physical proximity between the inductive elements of the first and second resonators.

5. The circuit of claim 1 wherein one or more of said first and second inductive elements of each of said first and second resonators are comprised of a bulk inductance formed by a metal line residing on a substantially nonconductive surface.

6. The circuit of claim of claim 5 wherein said one or more of said inductive elements is formed by two or more metal lines coupled in parallel to one another.

7. The circuit of claim 1 wherein one or more of said first and second capacitors are formed of two or more capacitors in parallel to reduce the parasitic effects associated with said first and second capacitors.

8. A circuit comprising:

two or more resonators magnetically coupled to each other in series, said two or more resonators each further comprising:

a first capacitor having a first capacitance and a first inductive element having a first inductance coupled between a signal line and a first ground; and

a second capacitor having a second capacitance and a second inductive element having a second inductance coupled between said signal line and a second ground so that current flowing through said first and second inductive elements are substantially in different directions.

9. The circuit of claim 8 wherein said signal line of a first of said two or more resonators is for transmitting an input signal to said first resonator; and said signal line of a second of said two or more resonators is for transmitting an output signal from said circuit to a load, said input signal being coupled to said first resonator through a first coupling capacitor in series with said first resonator and said output signal coupled to said load through a second coupling capacitor in series with said second resonator.

10. The circuit of claim 1 wherein said first and second inductances and said first and second capacitances of each of said two or more resonators are of identical values of

inductance and capacitance respectively.

11. The circuit of claim 1 wherein optimal coupling between said two or more resonators is maintained through a range of frequencies by altering the physical proximity between the inductive elements of said two or more resonators.

12. The circuit of claim 1 wherein one or more of said first and second inductive elements of each of said two or more resonators are comprised of a bulk inductance formed by a metal line residing on a substantially nonconductive surface.

13. The circuit of claim of claim 5 wherein said one or more of said inductive elements is formed by two or more metal lines coupled in parallel to one another.

14. The circuit of claim 1 wherein one or more of said first and second capacitors are formed of two or more capacitors in parallel to reduce the parasitic effects associated with said first and second capacitors.

15. A method of maintaining high loaded Q and optimal coupling for a parallel-tuned series resonant circuit over an extended frequency range, the circuit having two or more tuned resonators magnetically coupled to one another in series, each of the resonators comprising an inductance element coupled between a signal line and ground and having an inductance of L, and a capacitance element coupled between the signal line and ground and having a capacitance of C, said method comprising the steps of:

implementing the inductance elements as a bulk inductance formed by a metal line over a substantially nonconductive surface;

canceling out substantially all of the mutually induced currents between the two or more resonators;

reducing the value of L and increasing the value of C as frequency increases;

and

controlling the coupling between the two or more resonators by varying the physical distance between the two or more resonators.